

REMARKS

Claims 31-43, 46-48, 60-61, 65, 68, 84-86 and 88-92 have been amended. Claims 1-30, 44-45, 49-59, 62-64, 66-67, 69-83, 87 and 93-106 have been canceled. Claims 107-117 have been added. Claims 40, 65, 68 and 91 are withdrawn. New claims 112, 113 and 116 are drawn to a non elected species and are also withdrawn.

Claims 1-3, 5-9, 11, 12, 14-16, 31-39, 41-49, 51-53, 57, 59-64, 66, 69-76, 78, 82-90, 92-97, 99 and 103-106 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Compton, U.S. Publication No. 2004/0081446. This rejection is respectfully traversed.

Applicants note that Compton was published after the present application was filed. Accordingly, Compton is not a reference under 35 U.S.C. § 102(b), but instead under 35 U.S.C. § 102(e).

Claims 1-3, 5-9, 11, 12, 14-16, 44-45, 49, 51-53, 57, 59, 62-64, 66, 69-76, 78, 82, 83, 87 93-97, 99 and 103-106 have been canceled. Accordingly, this rejection is moot with respect to these claims.

As amended, independent claim 31 recites a “method of operating pixels in an array of an imaging device” by, among other elements: “opening a mechanical shutter; simultaneously resetting all the pixels of the array to begin a first integration period” and “closing the shutter to end the first integration period.”

Amended independent claim 41 recites an imaging device comprising, among other elements, “a mechanical shutter” and “a timing and control circuit configured to open the mechanical shutter, simultaneously operate each first reset transistor to reset the photoconversion devices in all pixels of the array to begin an integration period, and close the mechanical shutter to end said integration period.”

Amended independent claim 60 recites “timing control circuit for an imager array” comprising, among other elements, “circuitry for applying a first driving voltage to simultaneously operate at least one transistor of all pixels of the array to reset a photoconversion device of each respective pixel to a predetermined voltage to begin an integration period during which each photoconversion device collects charge in response to incident light” and “circuitry for closing a mechanical shutter to end the integration period.”

As amended, independent claim 83 recites “an imager device” comprising, among other elements, “global circuitry for simultaneously resetting photoconversion devices of the array to begin an integration period” and “a mechanical shutter for ending the integration period when the mechanical shutter is moved from an open position to a closed position.”

Compton discloses a camera having an image sensor. Compton’s camera also includes a mechanical shutter. According to Compton, the mechanical shutter is synchronized with a row-by-row reset operation to form an exposure window between the leading edge of the mechanical shutter and the last row of pixels that are reset. Compton at [0019], Figures 5a-5d. Thus, Compton does not disclose simultaneously resetting photoconversion devices of the array to begin an integration period, or any circuitry configured to perform such operation, as required by the present claims. For at least these reasons, withdrawal of this rejection is respectfully requested.

Applicants note that new independent claim 107 also recites “opening a mechanical shutter” and “simultaneously resetting all pixels of an array to begin a first integration period.”

Claims 10, 17-23, 27-30, 50 and 58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Compton in view of Yadid-Pecht et al., U.S. Patent No. 6,515,702. This rejection is respectfully traversed. Claims 10, 17-23, 27-30, 50 and 58 have been canceled. Accordingly, this rejection is moot.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: January 15, 2009

Respectfully submitted,

By 

Thomas J. D'Amico

Registration No.: 28,371

Elizabeth Parsons

Registration No.: 52,499

DICKSTEIN SHAPIRO LLP

1825 Eye Street, NW

Washington, DC 20006-5403

(202) 420-2200

Attorneys for Applicant